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ABSTRACT OF THE DISCLOSURE

A rare earth optical temperature sensor is disclosed for measuring high temperatures. Optical temperature sensors exist that channel emissions from a sensor to a detector using a light pipe. The invention uses a rare earth emitter to transform the sensed thermal energy into a narrow band width optical signal that travels to a detector using a light pipe. An optical bandpass filter at the detector removes any noise signal outside of the band width of the signal from the emitter.

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